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## NON-PHYSICAL OR GOING CONCERN VALUES

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In the appraisal of all public utility properties, whether for rate making or for sale, it is now recognized that a "value" should be assigned to the attached business that gives to the physical plant its real or market value. The "value" of the attached business is often called the "non-physical value" of the property. Sometimes the term "intangible value" is used to designate the "non-physical value." There are several other terms in common use, but each is coming gradually to be associated with some particular theory upon which the appraisal is based.

No appraisal can be consistent unless it is based upon some theory. This holds as true of an appraisal of physical property as of non-physical property. Two distinct appraisal theories have evolved, and a careful study of their evolution shows that, in the final analysis, one theory arises from the conception that a public service company is a public agent, while the other theory arises from the conception that a public service company is subject to competitive conditions.

The agency theory leads logically to an appraisal of the actual cost of the physical and non-physical property.

The competitive theory leads logically to an appraisal of the market value of the physical and non-physical property.

It does not fall within the scope of this paper to discuss the effects of applying these two theories in the appraisal of the physical property of a public service company. But one or two deductions may serve to illuminate the essential difference between the two theories.

The agency theory gives us: (1) Original conditions and actual quantities involved in producing the plant; (2) actual unit costs incurred under those conditions; (3) actual prices paid for real estate; and (4) actual deficits in fair return during the development period.

The competitive theory gives us: (1) Present conditions and quantities that would now be involved in reproducing the plant; (2) present unit costs; (3) present market value of real estate; and (4) the capitalized net profits (after deducting interest) derivable from the business.

Our present discussion relates to the fourth item in each of the above enumerations.

*Development cost* is the "non-physical value" that arises from an application of the agency theory. Development cost may be defined as being the residual deficit in "fair return" on the investment.

The "fair return" is the sum of the interest and the profit. If, for example, the annual interest rate is 6 per cent and the profit rate is 2 per cent, the fair return rate is 8 per cent. In calculating the development cost, the method is, briefly, this:

To the operating expenses (including depreciation and taxes) for the first year add the fair return, and subtract this sum from the gross income for the year. If the result is a minus quantity, a deficit in fair return, add it to the investment in plant, and with this total as a base start a similar calculation for the following year. If this method is applied from the beginning of operation down to the date of the appraisal, there will usually be found to be a residual deficit in fair return, which is the development cost. This method is often called the Wisconsin method. The Wisconsin Railroad Commission has used this method for about five years, and they call the residual deficit the going value, instead of calling it development cost. Although the method is simple in principle, there arise many interesting questions as to the details of its application in any given case.<sup>1</sup>

*Franchise value* is the term often used to denote the non-physical value of a public utility property, where the competitive theory is used in appraisal. If the franchise is without limit, the franchise value is the capitalized net profits derivable from the property. Profit is here used to mean the balance remaining after deducting from gross operating revenue the sum of the operating expenses (including depreciation and taxes) and the interest (say, at 6 per cent) on the investment in the physical plant. The annual profit if capitalized (that is, divided by 6 per cent in this illustration) gives the franchise value of an unlimited franchise, on the assumption that the annual profit will neither rise nor fall and that the interest rate will likewise remain constant. Where the franchise is limited, or where profits are likely to change, proper allowances must be made to arrive at the present worth of future profits. This method is of the same

<sup>1</sup> I have covered many of these details in an article on "Development Cost" in *Engineering and Contracting*, June 26, 1912, which is available as a pamphlet reprint that can be secured upon request.

nature as is used in deducing the good will value of an established competitive business of any sort. It has been frequently used in the appraisal of railway and other public service company property for taxation purposes. In the original appraisal of the railways for the Michigan Board of State Tax Commissioners, the capitalized profit method was applied. I would note that it seems to me to have been incorrectly applied in that case.<sup>2</sup>

Since capitalizing existing profits involves some reasoning in a circle if the values thus deduced are to be used as a basis for rate making, the tendency has been to abandon this method in rate cases. Nevertheless, it seems to me that it merits consideration even in a rate case.

A third theory of appraising public utility property has come into very extensive application. It partakes of the nature of the agency theory in some respects and of the competitive theory in other respects. This theory may be called the reproduction or replacement theory. It resembles the competitive theory in respect to its use of present prices and present conditions for determining the "value" of the physical plant. But it somewhat resembles the agency theory in respect to the determination of the "non-physical value." The cost of establishing the business, or the going concern value as it is often called, is deduced upon the hypothesis that a number of years would be required to build the plant and secure the business now attached to it. Not only would there be a deficit in fair return during this hypothetical period, but considerable money would be spent in advertising, canvassing and soliciting, in order to build up the existing business within this limited time.

Although the development period is hypothetical in a sense, it is, nevertheless, calculable within reasonable limits. It must not be so short a period that the saving in interest on the capital will not be wiped out by the increased costs incident to building the entire plant in a rush. The following are the main items of cost that are included in the cost of establishing the business, according to the reproduction theory.

<sup>2</sup> *United States Census Bulletin 21*, "Commercial Valuation of Railway Operating Property in the United States: 1904," contains one of the most complete published discussions of this method.

1. Organization cost:
  - (a) Legal, etc.
  - (b) Franchises, permits, etc.
  - (c) Patents, licenses, etc.
  - (d) Experiments and investigations
  - (e) Securing and training the staff
  - (f) Selling securities (brokerage, etc.)
  - (g) General and office (associated with organization cost)
2. Selling service:
  - (a) Advertising
  - (b) Canvassing and soliciting
  - (c) Other inducements to attract business (e.g., "free house wiring")
  - (d) General and office (associated with selling service)
3. Deficit in fair return during the construction and development period.

There are a number of strong arguments in favor of the reproduction theory, as to its application to non-physical as well as to physical property. Obviously it can be applied in a uniform manner to all utilities, regardless of the existence or non-existence of old accounting records. Questions as to conditions, prices, rates of fair return, etc., in years long past, are not raised. It may be noted, however, that in calculating the cost of establishing the business it may be necessary to assume rates for service that differ from existing rates, for the whole object is to show what it would cost to establish the existing amount of service when fair rates for that service are charged.

We have seen that "non-physical value" based on the competitive theory (the franchise value) is objected to on the ground that it involves reasoning in a circle where rates are involved. So, too, the "non-physical value" based on the agency theory (the development cost) finds opposition on the ground that the most unfortunate and worst managed company shows the greatest non-physical value.

No appraisal theory ever proposed has been free from criticism. Yet some theory or theories must be used if there is to be any consistency in the findings.

If public service companies had always been true and complete agents of the public, there could be but one theory for appraisals—the agency theory. But public service companies have only recently been *considered* as true agents. They have never been *treated* as true agents in any state. And in several states that now have laws

for enforcing an agency relation, we still witness the grossest forms of competition between municipally owned and privately owned utilities. In the state of Washington, for example, the railroad commission recently authorized the consolidation of two competing telephone companies, and now the federal government has begun action to break up the consolidation on the grounds that it is prohibited by the Sherman act.

These and numberless other facts show the futility of trying to make the agency theory retroactive in great degree, for it is not even very active now. Yet it seems wise in any rate case to present an analysis of the development cost based on the agency theory, as well as an analysis of the cost of establishing the business based on the reproduction theory. Also the capitalized net profits, or franchise value, should be presented. While no one of these methods may be conclusive in itself, obviously a conclusion is quickly reached where all three methods yield essentially the same result, as not infrequently happens. Moreover, the three methods at least determine the limits between which the non-physical value lies.

In this transitional period during which we are passing from a competitive theory to an agency theory of regulation of public utility rates, there is, of necessity, no single, clear-cut standard by which to arrive at public utility "values." Even the word "value" must often be taken to mean "cost," much as this jars the sense of propriety. And "cost" itself is often not actual but hypothetical, not what it actually was but what some one estimates it would be under assumed conditions.

Although the general drift of favor has been towards the reproduction theory, there are still many who believe in the soundness of Justice Harlan's decision in the *Smyth vs. Ames* case, namely, that all factors bearing upon value and cost should be considered by a rate-making body.